ABSTRACT OF THE DISCLOSURE

A modular DMFC array, and a related method of manufacturing such an array is provided. The modular DMFC array incorporates separately manufactured individual fuel cells that are connected after the manufacturing process. A locking mechanism incorporates the necessary electric connections. In one embodiment of the invention, the electrical connections also function as the locking mechanism. In such an embodiment, a separate mechanical fastening mechanism is not needed. In other embodiments of the invention, mechanical connections are provided to connect the individual fuel cells in the modular fuel cell array. Yet a further embodiment includes a carrier component on which the individual fuel cells are bonded. The electrical connections are provided either through the carrier component, or cell-to-cell.